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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,334	09/24/2003	Jian-Choug Doong	MR929-914	4412

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EXAMINER	
WILLIAMS, DON J	

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/668,334	DOONG ET AL.	
	Examiner	Art Unit	
	Don Williams	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/24/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the Applicant's application filed on September 24, 2003.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al in view of Alon et al (6,879,242).

As to claim 1, Kim et al disclose an emitting member (A) to be mounted at a side of the keyhole (2) of the lock, the emitting member (A) having a plurality of illuminates (13) adapted to be arranged along the keyhole (2); a receiving member (B) adapted to be mounted at a side of the keyhole (2) and facing the emitting member (A), the receiving member (B) having a receiver (5) for identification of color; and a key having a shank (1) for inserting in the keyhole (2), and a plurality of transparent plugs (4) respectively mounted in the shank (1) and aligned with the illuminates (13) when the shank (1) is inserted in the keyhole (2), (see fig. 1, column 3, lines 33-50, column 4, lines 27-38, fig. 2, column 3, lines 9-32). Kim fails to disclose that a color is provided in the plugs. Alon discloses a plurality of colors.

It would have been obvious to modify Kim et al to include colored plugs as disclose by Alon et al in order to improve the accuracy of distinguishing the light

transmitted through the aperture, thus preventing improperly unlocking the lock, (see fig. 2 column 3 lines 9-25, fig. 4, column 3, lines 26-60).

As to claim 2, Kim et al disclose the receiving member (B) further has a plurality of optical fibers (14) with a first end in alignment with one of the illuminates (13) and a second end connected with the receiver (5), (see fig. 2, column 3, lines 11-24, column 4, lines 44-52).

As to claim 3, Kim et al disclose illuminates (13) are mounted on a first positioning strips, and the first ends of the optical fibers (14) are mounted on a second positioning strip facing the illuminates (13), (see fig. 2, column 3, lines 11-24, fig. 3 and fig. 4, column 3, lines 52-67, column 4, lines 44-52).

As to claim 4, Kim et al disclose a plurality of illuminates (13) adapted to be mounted at a side of the keyhole (2) of the lock; a plurality of optical fibers (14) respectively mounted beside the illuminants (13) and connected with a receiver (5) for identification; and a key (1) having a shank for inserting in the keyhole (2), and a plurality of (4) respectively mounted in the shank and aligned with the illuminants (13) and the optical fibers (14) when the shank is inserted in the keyhole, (see fig. 1, column 3, lines 33-51, fig. 2, column 3, lines 9-25, fig. 3 and fig. 4, column 3, lines 52-67, column 4, lines 1-52). Kim et al fail to disclose reflective colored plugs. Alon et al disclose reflective colored plugs.

It would have been obvious for one ordinary skill in the art to modify Kim et al to include reflective colored plugs as disclosed by Alon et al to increase illumination since transmissive and reflective properties are interchangeable.

As to claim 5, Kim et al disclose illuminants (13) and the optical fibers (14) are mounted on a positioning strip, (see. Fig. 3 and 4, column 3, lines 52-67).

As to claim 7, Kim et al disclose initially inserting an original key (1) with reflective plugs (4) in a keyhole (2) of a lock; white light rays being given off from an emitting member (A) and reflected by plugs (4); receiving the light rays from the plugs (4) by optical fibers (14) and transferring into a receiver (5), and storing the of the light rays; inserting a key (1) in the keyhole (2) for unlocking while white light rays are being given off from the emitting member (A) and reflected by reflective colored plugs (4) of this key (1); receiving the colored light rays by the optical fibers (14) and transferring into the receiver (5); and comparing the color arrangement of the key with the stored arrangement to identify the key (1), (see fig. 1, column 3, lines 33-51, fig. 2, column 3, lines 9-32, fig. 3 and fig. 4, column 3, lines 52-67, column 4, lines 27-53). Kim et al fail to disclose that color is provided in the plugs. Alon et al disclose colors in the plugs.

It would have been obvious for one ordinary skill in the art to modify Kim et al to include colors in the plugs in order to improve accuracy in distinguishing the light transmitted through the aperture thus preventing improperly unlocking the lock, (see fig. 2, column 3, lines 9-25, fig. 4, column 3, lines 26-60).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6 rejected under U.S.C. 102(e) as being anticipated by Alon et al (6,879,242).

As to claim 6, Alon et al disclose initially inserting an original key (10) or (30) with transparent colored plugs (24), or (52), (54), (56), and (58), in a keyhole (22) of a lock (20); white light rays being given off from an emitting member(26) or (46) and passing through the transparent colored plugs (24), or (52), (54), (56), and (58); receiving the light rays through the transparent colored plugs (24), or (52), (54), (56), and (58) into a receiver (28), and storing the color arrangement (16) of the light rays (38), (40), (42), and (44); inserting a key (10) or (30) in the keyhole (22) for unlocking while white light rays are being given off from the emitting member (26) or (46) and passing through transparent colored plugs (24) or (52), (54), (56), and (58) of this key (10) or(30); receiving the colored light rays (38), (40), (42), and (44) into the receiver (28) or (62); and comparing the color arrangement (16) of the key (10) or (30) with the stored arrangement to identify the key (10) or (30), (see fig. 1, column 2, lines 49-67, column 3, lines 1-8, fig. 2, column 3, lines 9-25, fig. 3, column 3, lines 3-60, column 4, lines 1-55).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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